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TK4018
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UNITED STATES DEPARTMENT OF AGRICULTURE
Rural Electrification Administration
Technical Standards Committee "A"

Supplement No. 2, January 1986, to
REA Bulletin 43-5, List of
Materials Acceptable for Use on
Systems of REA Electrification Borrowers

The attached pages for the "List of Materials Acceptable for Use on Systems of REA Electrification Borrowers" are those which have been revised by action of the Technical Standards Committees during the months of October through December 1985. The following changes should be made in order to keep it up to date. Pages with a comma between are on the same sheet, both being changed.

<u>Add New Page</u>	<u>Remove Page</u>	<u>Add New Page</u>	<u>Remove Page</u>
ii	ii	du	du
iv	iv	ea-1	ea-1
v	v	eq(2.3)(Cond.)	eq(2.3)(Cond.)
	g-1,g-2	eu	eu
k(3)(Cond.)	k(3)(Cond.)	ga-2	ga-2
l-1	l-1	sb-1	sb-1
l(1)(Cond.)	l(1)(Cond.)	sb-3	sb-3
p-3	p-3		zy-1
p-10	p-10		zy-2,zz-1
w,x	w,x		zz-2,zz-3
af(Cond.)			zz-4,zz-5
ai-2	ai-2		zz-6
an(3.1)(Cond.)	an(3.1)(Cond.)	Uae(1)(Cond.)	Uae(1)(Cond.)
ap-1	ap-1	Uhb(1)(Cond.)	Uhb(1)(Cond.)
ap-2	ap-2	Uhb(2)(Cond.)	Uhb(2)(Cond.)
av-1	av-1	Uhp(2)(Cond.)	Uhp(2)(Cond.)
av-3	av-3	Uhp(4)(Cond.)	Uhp(4)(Cond.)
av-5	av-5	Uhq(1)(Cond.)	Uhq(1)(Cond.)
bu	bu	Uhv-1,Uhv-2	Uhv-1,Uhv-2
cg-1	cg-1	Uhv-4	Uhv-4
cu	cu	Uhv-5,Uhv(1)(Cond.)	Uhv-5,Uhv(1)(Cond.)
dh	dh	Uhy(1)(Cond.)	Uhy(1)(Cond.)
		Uhy(3)(Cond.)	Uhy(3)(Cond.)

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INDEX - PART I

A

Adapters, insulator.dd
Air Break switches.	cg
Anchor rods.	x
" rod bonding clamps.ck
" shackles. . . . .	.bo
Anchors.	z
Angle suspension brackets. . . . .	.cr
Anodes.	U si
Armor grip suspension assembly.	m, ei
Armor rods.	bv
Arm assemblies, narrow profile.	eq
Arms, laminates upswept. . . . .	.fq
Arresters, lightning (surge arresters). . . . .	.ae

B

Ball hooks.	eh
Bolts, carriage.	i
" clevis. . . . .	.ef
" double arming.	n
" double upset.	q
" eye. . . . .	.o
" eye double arming.	dy
" machine. . . . .	.c
" shoulder eye.	o
" single upset. . . . .	.bs
" thimble type eye, angle.	ba
" " " " straight. . . . .	.ao
Braces, crossarm, steel.	h
" " wood and fiberglass. . . . .	.cu
" sidearm, diagonal.	ac
" " vertical.	bb
" special crossarm.	em
Brackets, angle suspension.	cr
" cutout extension.	fn
" cutout and arrester extension	fm
" insulated. . . . .	.da
" pole top pin . . . . .	.cs
" post insulator . . . . .	.eb
" transformer	dm
" extension	fj
" offset neutral . . . . .	.ec
" transformer secondary insulated	fo
" oil circuit recloser . . . . .	.fk
" swinging angle . . . . .	.fu
" narrow profile . . . . .	.eq

Capacitor hangers	fd
Capacitors, shunt	fc
Carriage bolts	i
Clamps, anchor rod bonding	ck
Clamps, deadend	l
" " with socket eye	ej
" , ground rod	aj
" , " wire	dp
" , guy	u
" , hot line	ap
" , loop deadend	bn
" , suspension	m
" , " with socket eye	ei
" , triplex cable support	fr
Clevis bolts	ef
Clevis type wireholder	bt
Clevises, conduit	dr
" , secondary swinging	s
" , service deadend	bh
" , " swinging	as
" , thimble, side opening	ci
Clips, ground wire	al
" , guy	dz
Combination cutout and arrester	ax
" " " disconnect switch	sl
" " " gap	ay
Conductors	av
Conduit clevises	dr
" wireholders	ds
Connectors	p
Connectors, hot line	fi
" , grounding	bu
Crossarm assemblies and Arm Spacers	gj
" " , "Z" type (wishbone)	gz
" " , H frame	gw, gy
" braces, sidearm diagonal	ac
" " , " vertical	bb
" " , special	em
" " , steel	h
" " , wood	cu
" pins, steel	f
" reinforcing plate	eg
" saddle	fg
Cross brace assembly	vx
Cutout and arrester, combination	ax
" " gap, combination	ay
Cutouts and fuses	af

D

Deadend clamps	l
" " with socket eye . . . . .	.ej
Deadends, compression	cp
" automatic & Formed Type	by
" for steel strand	l
" for guy strand	u
" secondary	cq
" service	dt
Disconnect switches, hook operated . . . . .	.sb
Double arming bolts	n
" " eye bolts	dy
" " plate	ct
" upset bolt . . . . .	.q

E

End links	br
Extension links	du, eu
Eye bolts	o
" " double arming	dy
" nuts . . . . .	.aa
" screw, elliptical	dq

F

Fuses and cutouts	af
Fuses, power, substation . . . . .	.af
Fuses, current limiting, backup	ag

G

Gains, pole	bi
Ground connectors, transformers	bu
Ground rods	ai
Ground rod clamps	aj
Ground wire clamps . . . . .	.dp
" " clips	al
" " staples	al
" " supports, overhead	ed
Grounds, pole	dh
Ground wire, pole	cj
Grounding conductor, substation, coated steel	sr
Guy attachments (Distribution)	v
" clamps	u
" deadends	u
" markers	at

Guy Hooks	bj
" plates	bk
" strain insulators	w
" wire	y
" " clips	dz
Guying attachments (Transmission)	fv
" plate	fu

H

Hangers, capacitor	fd
Hooks, ball	eh
Hot Line Clamp	ap

I

Insulated bracket	da
Insulator adapter	dd
Insulators, guy strain	w
" , pin type	a
" , post type	ea
" , spool	cm
" , suspension	k

K

Keys, polez
----------------------	----

L

Lag screws	j
Lightning arresters (surge arresters)	ae
Links, extension	du
Links, extension (fiberglass)	eu
Locknuts	ek
Loop deadend clamps	bn

M

Machine Bolts	c
Meter sockets	gb
Meters, watthour	ga

N

Numbers, pole	az
Nut, eye	aa
" , thimble type eye	ab
Neutral bracket, offset	ec

O

Oil circuit reclosers	be
Overhead ground wire supports.	ed

P

Pin type insulators	a
Pins, crossarm	f
" , pole top	b
Pipe spacers	dl
Plates, crossarm reinforcing	eg
" , double arming	ct
Pole bearing plate	fs
Pole gains	bi
Pole grounds	dh
Pole ground wire	cj
Pole numbers and letters	az
Pole top pin bracket	cs
" " pins	b
Post type insulators	ea

R

Rack, primary metering	fl
Reclosers, automatic circuit	be
Regulator by-pass switch	sk
Regulators, voltage	sc
Rods, Anchor	x
" , armor	bv
" , ground	ai

S

Screws, elliptical eye	dq
" , lag	j
Secondary swinging clevises	s
Sectional ground rods	ai
Sectionalizers	el
Service deadends	dt

V

Service deadend clevises . . . . .	.bh
" swinging clevises	as
Shackles, anchor	bo
Shunt Capacitors	fc
Sidearm diagonal brace	ac
" vertical "	bb
Single upset bolts	bs
Sockets, meter	gb
Splices, automatic line	bx
" , compression	cy
" , oval tube	cx
" , for steel strand	cz
Splice, formed type	ex
Splice cover, plastic	es
Spool Insulators	cm
Staples	al
Steel Strand	y
Structure assembly (For H-frame construction) . . . . .	.gy, gw
Structure assembly steel pole	gx
Supports, overhead ground wire	ed
Surge Arresters	ae
Suspension Clamps	m
" " with eye socket	ei
" Insulators	k
Switches, combination power fuse and disconnect . . . . .	.sl
" , hook operated disconnect	sb
" , oil	bz
" , pole top air break	cg
" , recloser, by-pass	sj
" , regulator by-pass	sk

T

Thimble clevises, side opening	ci
" type eye bolts, angle	ba
" " " " , straight	ao
" " " " , nut	ab
Thimbles, aluminum	dv
Tie, insulator, formed type	ah
Transformer bracket . . . . .	.dm
" ground connector	bu
Transformers, pole and power	an
" , current	sd
" , voltage . . . . .	.se

V

Voltage regulators	sc
------------------------------	----

W

Washers	d
" , spring . . . . .	.aw
Watthour meters	ga
Wire guard, plastic	er
Wireholders	ar
" , clevis type	bt
" , conduit	ds
Wood crossarm braces	cu

k - Insulator, Distribution Deadend

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Chance</u>		
Distribution deadend	965	1. To obtain experience
Catalog No. C654-0000	4/22/71	
"Epoxilator II"		2. For use as deadends on
(15 kV line-to-line)	1082	distribution lines only
Catalog No. C654-2500	1/22/76	
"Epoxilator II"	1129	3. Recommended maximum
(25 kV line-to-line)	12/15/77	working load is 5,000
		lbs.
		4. Not recommended for use
		in areas subject to
		contamination.
<u>Joslyn</u>		
Distribution deadend	1074	For use as deadends on UDI
671-3002	9/25/75	distribution lines only
	1088	up to 15 kV line-to-
Distribution deadend	4/15/76	line voltage.
UDI 671-3010		
	1074	For use as deadends on
	9/25/75	distribution lines only
	1088	up to 25 kV line-to
	4/15/76	line voltage.
<u>Lapp</u>		
Distribution deadend	1282	
Catalog No. 151001, 15 kV	6/21/84	
Catalog No. 151002, 25 kV		
		Same as Chance
<u>Tranpol</u>		
Distribution deadend	1158	1. To obtain experience
H-15 kV-4	3/1/79	
H-25 kV-6	1208	2. For use as deadends on
	3/19/81	distribution lines only
		3. Not recommended for use
		in areas subject to
		contamination.

NOTE: When insulators from this page are used, adjust construction drawing material list quantities as necessary.

Conditional List
k(3.1)
Oct. 1985

k - Insulator, Distribution Deadend

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Salisbury</u>		
Distribution deadend	1226 (1/7/82)	Same as Chance [See Cond. k(3)]
9501 Series, 15 kV	1304 (8/8/85)	
9575 Series, 25 kV	1291 (12/20/84)	
<u>Sediver</u>		
Distribution deadend	1286	Same as Chance [See Cond. k(3)]
ADI-4 15 kV	9/6/84	
ADI-6 25 kV		

NOTE: When insulators from this page are used, adjust construction drawing material list quantities as necessary.

1 - Clamp, deadend

DISTRIBUTION

Copper 2 through 6 CWC 4A through 8A		ACSR (Aluminum Clamps)			
		4/0 & 3/0	2/0	1/0	2 & 4
-	ALCOA	302	302	302	302
-	American Connector Engineering	QDA-63	QDA-53	QDA-53	QDA-53
MD-52-N	Anderson/Sq.D	PG57N	PG57	PG-46N	PG-46N
-	Bethea Electrical	DA-20N	DA-15-N	DA-15-N	DA-15-N
-	Bethea Metals		ADQ-53	ADQ-53	ADQ-53
-	Continental	AQD-63	AQD-52	AQD-52	AQD-52
-	C & R	CR-20-90	CR-10-90	CR-10-90	CR-10-90
2111	Joslyn	BT5210	J25392	J25389	J25389
2111	Knox	5210			
-	Lapp	306120N	306118N	306118N	306118N
80500	Ohio Brass	89237	86534	86534	86534

1-2
July 1985

1 - Deadend for Steel Strand (Overhead Ground Wire)

TRANSMISSION

For High Strength Steel Strand and Aluminum-Clad Steel Strand

Clamp Type

<u>High Strength Steel</u>		<u>Aluminum-Clad Steel</u>		
<u>Manufacturer</u>	<u>3/8" and 7/16"</u>	<u>7 No. 9 AWG</u>	<u>7 No. 8 AWG</u>	<u>7 No. 7 AWG</u>
Anderson/Sq. D	SWDE-55N			
Bethea Electrical	FD-550-N (For use on 3/8" steel strand only)			
Ohio Brass	80437			

1 - Deadend for steel strand (overhead ground wire)

TRANSMISSION

For high strength, extra high strength steel strand and aluminum clad steel strand

Manufacturer	<u>Compression Type</u>				
	<u>High Strength Steel</u> 3/8"	<u>7/16"</u>	<u>Aluminum-clad steel</u> 7 No. 9 AWG	<u>7 No. 8 AWG</u>	<u>7 No. 7 AWG</u>
Fargo	82S712	82S714	82A79	82A78	82A77
Alcoa	4620.12	4627.14			
Burndy	YTW375E	YTW438E	YTW7M9T	YTW7M8T	YTW7M7T
Homac	Order by wire size and type				
				82S710	82S712 82S714

<u>Formed Type*</u>		
Chance	16M-AWTLG	20M-AWTLG
Helical Line Prod.	HG210-3/8 HG211-7/16 HG523-12.5M	HG528-20M HG209-5/16 HG210-3/8 HG211-7/16

* Class B galvanizing. When overhead groundwire has Class C galvanizing, formed deadend should also have Class C galvanizing.

<u>Automatic Type</u>		
Fargo	GDE-302	GDE-303
Reliable	5202	5203
		GDE-301 GDE-302 GDE-303
		5201 5202 5203

Conditional List

1(1)

January 1986

1 - Clamp, deadend

DISTRIBUTION

2-Bolt Straight Line, Aluminum Alloy

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
* <u>Anderson/Square D</u> Aluminum alloy deadend Catalog No. ADS-48-N (2/0 ACSR) Catalog No. ADS-60-N (3/0 ACSR)	1130 (1/5/78) 1148 (9/28/78)	(a) To obtain experience (b) Applications limited to replacements under hot line conditions.
* <u>Barron Bethea</u> Aluminum alloy deadend Catalog No. SDF-10A (4 through 4/0 ACSR)	871 (7/6/67)	Same as above.
* <u>Bethea Electrical</u> Aluminum alloy deadend Catalog No. ASO-684-2 (1/0, 2/0, 3/0 ACSR) Catalog No. ASD-2-N (4-2/0 ACSR) Catalog No. ASD-34-N 3/0, 4/0 ACSR	961 (2/18/71) 1201 (12/4/80)	Same as above. Same as above.
* <u>Burndy</u> Aluminum alloy deadend Catalog No. CUW26RE-1 #2-2/0 Str. Aluminum #4-2/0 ACSR	1255 (3/24/83)	Same as above.
* <u>Continental</u> Aluminum Alloy deadend Catalog No. HDSO-57 (with side opening) (4-4/0 ACSR) Catalog No. SGA-52-23 (4-2/0 ACSR) Catalog No. SGA-60 (3/0-4/0 ACSR)	1244 (10/7/82)	Same as above

*Straight line deadend clamps are applicable for urban construction where tensions are moderate and on lines often worked hot.

p - Connectors, Distribution (Parallel Groove)

Applicable Specification: "REA Specification for Connectors," DT-8

ACSR to Copper or Copperweld-Copper

ACSR Size (Bare Conductor)

	3/0	2/0	1/0	2	4
Alcoa	197	R193	R193	195	195
Anderson/Sq. D	LC-811A	LC-811A	LC-522A	LC-511A	LC-511
Blackburn	PAC7	PAC7	PAC4	2CA	4CA
Fargo	GA-616C	GA-616C	GA-620C	GA-620C	GA-620C
Joslyn	600ALC	555ALC	438ALC	438ALC	438ALC
Reliable	600ALC	555ALC	438ALC	438ALC	438ALC

ACSR Size (Over Armor Rods)

	3/0	2/0	1/0	2	4
Alcoa	201	R197	R197	R197	199
Anderson/Sq. D	LC-833	LC-833	LC-811A	LC-811A	LC-811
Blackburn	-	-	PAC7	PAC7	PAC7
Fargo	GA-9843C	GA-9842C	GA-616C	GA-616C	GA-616C
Joslyn	-	-	744ALC	600ALC	600ALC
Reliable	-	-	744ALC	600ALC	600ALC

p - Connector, Distribution

Applicable Specification: "REA Specification for Connectors," DT-8

Copper Type Conductors					
Connections to same size or smaller					
C'Weld Copper	2A	4A	6A	8A	
Copper	0x7	2x3	4	6	
Bare Conductor					
Anderson/Sq. D	DG-1/0	DG-1	DG-2	DG-4	DG-6
(s) Blackburn	1/OH	1H	2H	4H	6H
(s) Burndy	KS-25	KS-23	KS-23	KS-20	KS-17
(s) Dossert	DS-10-F	DS-6-F	DS-6-F	DS-3-F	DS-2-F
Fargo	GC-5020	GC-5002S	GC-5002	GC-5004	GC-5006
(s) Frankel	B-1/0	B-2	B-3	B-4	B-6
(s) Greaves	-	A-8	-	A-5	A-3
(s) ILSCO	IK-1/0	IK-2	IK-2	IK-4	IK-6
(s) Joslyn	-	IF	2F	4F	6F
(s) Kearney	118109	118109	118108	118104	118102
(s) Krueger & Hudepohl	UC58C-EV	-	-	-	-
(s) Penn-Union	S1/0	S2	S3	S4	S6
(s) Reliable	-	1F	2F	4F	6F
ITT Royal	1739	1739	-	-	-
(s) Sherman	TS1/0	TS2ST	TS-2	TS-4	TS-6
(s) Weaver	10W	1W	2W	4W	6W
Over Armor Rods					
Anderson/Sq. D	K-5	K-4	K-4	K-2	K-2
Blackburn	2B350	2B350	2B4/0	2B2/0	2B1/0
Burndy	KVS-31	KVS-31	KVS28	KVS26	KVS26
Fargo	GC-5035	GC-5035	GC-5040	GC-5020S	GC5020
ILSCO	IKB-350	IKB-350	IKB-4/0	-	-
(s) Kearney	118112	118112	118111	118110	118110
Penn-Union	VT-4	VT-3	VT-3	VT-2	VT-1
Weaver	350CX	350CX	4/0CX	2/0CX	1/0CX

(s)designates split bolt connectors

Long Connectors (Split Bolt)			
Copper to Copper			
	2	4	6
Anderson/Sq. D	C-2-L	C-4-L	C-6-L
Blackburn	2H3	4H3	6H3
Burndy	KS-22-3	KS-20-3	KS-17-3
Dossert	DS5-3	DS3-3	DS2-3
Greaves	A-9	A-6	A-4
Joslyn	-	4-F	6-F
Kearney	118107	118105	118103
Penn-Union	SEL-3	SEL-4	SEL-6
Reliable	-	4F	6F
Sherman	-	TSS-4	TSS-6
Weaver	2W3	4W3	6W3

p - Connectors, Transmission

BOLTED TYPE

Applicable Specification: "REA Specification for Connectors," DT-8

ACSR to ACSR
ACSR to Copper



Alcoa

580 Series

Burndy (ACSR to ACSR)

UP-A, UP-R

When ordering these clamps specify size, stranding and material of both conductors.

Compression Type

ACSR to ACSR
Same Size



<u>Conductor Size</u>	<u>Alcoa</u>	<u>Anderson</u>	<u>Burndy</u>	<u>Kearney</u>	<u>ITT Blackburn</u>
1/0	5074.438	VPUS	YCS25R	OHR-1/0-61AJ	RCJ10
2/0	5074.484	-	YCS26R	OHR-2/0-61AJ	RCJ20
3/0	5075.547	Order	YCS27R	OHR-3/0-61AJ	RCJ30
4/0	5075.609	by	YCS28R	OHR-4/0-61AJ	RCJ40
266.8 kcmil	5076 Order by	Conductor	YCS30R	HR-266-267AJ	RCJ266M
336.4 kcmil	5076 stranding	Size	YCS33R	HR-336-267AJ	RCJ336M

ACSR to Copper

Alcoa	5070 Series
Anderson/Sq. D	VPUS
Burndy	YCR-R-CA

(Order by conductor sizes)

p-11
July 1985

p - Connectors

(wedge type)

<u>Manufacturer</u>	<u>Aluminum-to- aluminum</u>	<u>Aluminum-to- copper</u>	<u>Copper-to- copper</u>	<u>Tap Connections (Al to Al, Al to Cu)</u>
AMP	"Ampact" (Aluminum)	"Ampact" (Aluminum)	"Ampact" (Copper)	"Ampact" (Aluminum)
UTM	"Wrench-Lok"	"Wrench-Lok"	--	"Wrench-Lok"

W
January 1986

w - Insulators, guy strain
(Fiber Reinforced Plastic)

Ult. Strength, pounds	11,000	15,000	21,000
<u>Barron Bethea</u>	BB-11-CC Series	BB-15-CC Series	BB-21-CC Series
<u>Bethea Electrical Products</u>	FGS16 Series	FGS16 Series	FGS21 Series
<u>Continental</u>	G-11 Series	G-15 Series	G-21 Series
<u>Flagg (MIF)</u>	150 Series	150 Series	210 Series
<u>Hughes Brothers</u>	-	692 Series	694 Series
<u>Joslyn-Empire</u>	400 Series	500 Series	650 Series
<u>Kearney</u>	-	321015	321021
<u>McGraw-Edison</u>	-	DEG 15 Series	DEG 30 Series
<u>Tranpol</u>	HSI1-1P Series	HSI-2X Series	HSI3-1P Series

x
January 1986

x - Rod, anchor

Applicable Specification: ANSI C135.2, "Standards for
Galvanized Ferrous Strand
Eye Anchor Rods."

Applicable Sizes: Single guy - 5/8 inch diam. 6, 7 and 8 feet long
- 3/4 inch diam. 8, 9 and 10 feet long
- 1 inch diam. 9 and 10 feet long

Double guy - 5/8 inch diam. 7 and 8 feet long
- 3/4 inch diam. 8, 9 and 10 feet long
- 1 inch diam. 9 and 10 feet long

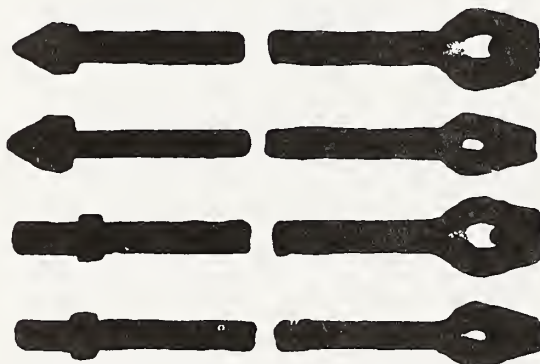
Single Guy Drive - 5/8 inch diam. 7 and 8 feet long
- 3/4 inch diam. 8, 9 and 10 feet long
- 1 inch diam. 9 and 10 feet long

Double Guy Drive - 5/8 inch diam. 7 and 8 feet long
- 3/4 inch diam. 8, 9 and 10 feet long
- 1 inch diam. 9 and 10 feet long

The following manufacturers have shown compliance with the applicable specifications. Some manufacturers cannot supply all sizes listed above. Check with manufacturer or distributor for availability.

Chance
Dixie
Grip-Tite

Joslyn
Kortick
McGraw-Edison
Utilities Service



af
Conditional
January 1986

af - Cutouts, Distribution, Open
with Linkbreak Attachment

<u>Manufacturer</u>	<u>Type</u>	<u>Voltage Rating</u>	<u>Meeting No. and date</u>	<u>Conditions</u>
A.B. Chance	C	15, 27 kV	1311 (12/19/85)	1. To obtain experience. 2. Limited to 100 amp cutouts. 3. To be used only with Chance, McGraw Edison and Kearney fuses. Will not break S&C and some other fuse types.

ai - Rods, Ground

Applicable Size: The standard length is 8 feet and catalog numbers listed below are for this length. Longer rods may be required for special conditions.

Hot Dip Galvanized Steel

<u>Manufacturer</u>	<u>5/8"</u>	<u>3/4"</u>
Blackburn	GR6258	GR7508
Boggs	G588	G348
	PTG588**	PTG348**
Carolina Galvanizing	G588	G348
	G-588PT**	G-348PT**
Chance	8578	8618
	C203-0107**	C203-0109**
	C203-0377*	
Dixie	D8578	D8618
Erico	G588	G348
	G588PT**	G348PT**
Galvan	GR6258	GR7508
General Electric	0982-00002	0982-00003
Grip-Tite	GT588	GT348
	GT588PT**	GT348PT**
Joslyn	J3358B*	J3458B*
	J5328	J5338
	J5228**	J5238**
Knight	G-588	G-348
	G-588PT**	G348PT**
Kortick	K4658	K4678
Lloyd	6258H	7508H
McGraw-Edison	DN5S8	DN6S8
	DN6D8*	DN7D8*
National Utility Products	UR1016-8	UR1216-8
Porcelain Products	7338	7348
Power Line Hardware	GR-588G	GR-348G
Utilities Service	5307	6338
Weaver	8580G	8340G
Wilcor	WA8580G	WA8340G

Electro-Galvanized Steel

Calpico	G8580	-
LMP	6258E**	7508E**

Stainless Steel

Teledyne (MEFCO)	TDY Sol	TDY Sol
Wilcor	WA 588-S	WA348-S

*Rod furnished with clamp.

**Rod furnished with 4 ft., No. 6 tinned or galvanized copper pigtail.

ai - Rods, ground, sectional

Galvanized steel and
copper-covered steel

Copper-covered ground rods are listed with a 13 mil minimum at any point and a 15 mil average covering of copper. All purchases should specify that a factory certification of the thickness of the copper must accompany the shipment of the rods.

Sectional Ground Rods

<u>Manufacturer</u>	<u>8' long</u>	<u>10' long</u>	<u>Coupling</u>	<u>Driving studs</u>
Blackburn	6258S	6260S	60C	60DS
Carolina Galv.	S-588 GSD-588 GSD-348	S-5810 GSD-5810 GSD-3410	CR58 CG250 CG250	DSH58 DSH58 DSH58
Chance Galv. Steel	C203-0052	8512	8611	-
Erico	ES858	ES1058	CR58	DSH58
Joslyn Galv. Steel	J9158 J23282.8	J9160 J23282.10	J9182 J23282A	J9186 J9186
Knight	S858	S1058	SC58	DS58
Kortick	K5441	K5443	K5482	K5492
McGraw-Edsion Galv. Steel	DN17S8	DN16S10	DN1K2	-
Power Line Hardware	GR-588CS	GR-5810CS	CBC-58	DS-58
UTM	-	-	910-030-05	-
Weaver	W-588T	W-5810T	158C	358D

an - Transformers, Power
Single-Phase, Step-Down
for Distribution Substation Use

Condition of Acceptance: To obtain experience.

Westinghouse

an - Transformers, Power
Three-Phase, Step-Down
for Distribution Substation Use

Condition of Acceptance: To obtain experience.

Primary Voltage-kv	750	1000	1500	KVA 2000	2500	3750	5	7.5	10	12	15	20	25	30
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ASEA Electric

115
138

S S S

Transformers 5 MVA and larger also accepted as load tap changing transformers using ASEA Electric Type UZD load tap changers.

Central Moloney

34.4

S

Federal Pacific

34.4
67.0

S S S
S S

Transformers 5 MVA and larger also accepted as load tap changing transformers using Federal Pacific Type TC-525 load tap changers.

Ferranti-Packard

34.4

S S S S X S

General Electric

34.4
43.8
115
138

S S S
S S S

Transformers 5 MVA and larger also accepted as load tap changing transformers using General Electric Types LR72, LR65 and LRT-200 load tap changers.

Hevi-Duty

34.4
43.8
67.0
115
138

S S S
S S S
S S S
S S S
S S

Transformers 5 MVA and larger also accepted as load tap changing transformers using Westinghouse Types UTS-A and UTT-B and Siemens Allis Type ILS load tap changers.

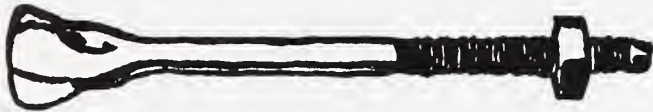
ao - Bolt, strand eye, straight (thimble eye)

Applicable Specification: ANSI C135.4, "Standards for
Galvanized Ferrous Eye Bolts
and Nuts for Overhead Line
Construction."

Applicable Sizes : 5/8 inch, 6 through 12 inch length
3/4 inch, 8 through 12 inch length

The following manufacturers have shown compliance with the applicable
specification:

A. B. Chance Company
Dixie Electrical Manufacturing Company
Joslyn Mfg. and Supply Company
Kortick Manufacturing Company
*McGraw-Edison
Utilities Service Company



*"Static proof" designs available.

ap-1
January 1986

ap - Clamp, hot line
Copper and Copperweld-copper Conductor
Clamps listed below have spring action and enclosed thread chambers

Conductor Size

Copper	6 thru	2/0
Copperweld-copper	8A thru	2A

Anderson	BH-00
Blackburn	HLC 2108
Chance	S1520CC
Electrical Specialty	BC-2/0
Fargo	GH-100*
Ideal	3532
Penn-Union	HLC-020-LS

* For use with CL Fuse, order GH-201

ap - Clamp, hot line
ACSR with armor rods

Clamps listed below have spring action and enclosed thread chambers.

Conductor Size		4/0 & 3/0	2/0	1/0 & 2	4
	<u>Tap Conductor</u>				
Anderson	Aluminum Copper	AH-7 AH-7-GP	AH-4 AH-4-GP	AH-4 AH-4-GP	AH-4 AH-4-GP
Chance	Aluminum Copper	S1540-AA S1540-AC	S1540-AA S1540-AC	S1530-AA S1530-AC	S1530-AA S1530-AC
Electrical Specialty	Aluminum Copper	- -	AHC-2/0 AHC-2/0 GP	AHC-2/0 AHC-2/0 GP	AHC-2/0 AHC-2/0 GP
Fargo	Aluminum Copper	GH-102A GH-102AC	GH-102A GH-102AC	GH-101A GH-101AC	GH-101A GH-101AC
Penn Union	Aluminum Copper	-	-	HLCA-040 HLCA-040	HLCA-040 HLCA-040
Utilco	Aluminum	-	HLC-397	-	HLC-40

ar
July 1985

ar - Wireholder

Applicable Specification: "REA Specification for Service Wireholders," D-15

	<u>With #22 Wood Screw</u>	<u>With 3/8" x 5" Bolt</u>
Chance	3-11-44	-
Dixie	D3-11-44	-
Joslyn	J089	-
McGraw-Edison	DW1R1	-
Porcelain Products	1986	-
Universal Clay Products	415	-



NOTE: For Triplex type service cable see clevis type wireholders on page "bt."

av - Conductor, ACSR

Applicable Specification: ASTM Specification B 232

Preferred Sizes: (Larger sizes may be used where the engineer's study shows they are required.)	<u>Distribution</u>	<u>Transmission</u>
	4 - 6/1	1/0 - 6/1
	4 - 7/1	2/0 - 6/1
	2 - 6/1	3/0 - 6/1
	2 - 7/1	4/0 - 6/1
	1/0 - 6/1	266.8 kcmil - 26/7
	2/0 - 6/1	336.4 kcmil - 26/7
	3/0 - 6/1	477 kcmil - 26/7
	4/0 - 6/1	556.5 kcmil - 26/7
	266.8 kcmil 18/1	795 kcmil - 26/7
	336.4 kcmil 18/1	954 kcmil - 54/7
	477 kcmil 18/1	

The following manufacturers have shown compliance with the applicable specifications:

Alcan Cable

Aluminum Company of America

Cablec

Kaiser

Nehring

Noranda

Pirelli Cable

Reynolds

Southwire

NOTES

1. Conductors with 18/1 stranding have different sag characteristics than conductors with 6/1 or 26/7 stranding. This difference in sag characteristics must be taken into consideration in the line design.

2. 266.8 kcmil 26/7, 336.4 kcmil 26/7, and 477 kcmil 26/7 may be used for distribution underbuild on transmission lines.

av-2
Oct. 1985

av - Conductor, copper

Applicable Specifications: ASTM Specification B1-81 (or latest revision) for hard-drawn solid
ASTM Specification B8-81 (or latest revision) for hard drawn stranded and soft stranded
ASTM specification B3-74(80) (or latest revision) for soft or annealed solid.

Preferred Sizes: Hard-drawn solid 4 and 6
 Soft or annealed solid 4 and 6
 Hard-drawn stranded 2x3, 1/0 x 7,
 2/0 x 7
 Soft stranded 4 and 6

The following manufacturers have shown compliance with the applicable specifications:

Alcan Cable

Allied Tube & Conduit

Anaconda Power Cable

Essex

General Cable

Hatfield (Sizes 4 and 6)

Phelps Dodge

Rome Cable

Service Wire Company

Southwire

av - Conductor, Copperweld-copper

Applicable Specification: ASTM Specification B 229

Preferred Sizes:	<u>Distribution</u>	<u>Transmission</u>
	8A	1/0 F
	6A	2/0 F
	4A	3/0 F
	2A	4/0 F

The following manufacturers have shown compliance with the applicable specification for the sizes indicated:

Copperweld Steel	(All sizes)
Southwire	(2A and smaller)

av-4
Oct. 1985

av - Conductor, Service
(Single Conductor)

<u>Manufacturer</u>	<u>Aluminum</u>	<u>Copper</u>
Alcan Cable	x	x
Anaconda Power Cable	x	x
Conductor Products	x	
Essex	x	x
Kaiser	x	
Phelps Dodge	x	
Pirelli Cable	x	x
Reynolds	x	
Rome Cable	x	x
Southwire	x	x
Cablec	x	

Applicable Specification: IPCEA-NEMA Standard S-66-524

Insulation: Cross-linked thermosetting polyethylene or equal,
meeting requirements of Sections 7.3.3 and 7.3.5.

Conductor: Physically and electrically equal to MHD copper or
HD (EC-H19) aluminum, meeting requirements of Section 7.3.2.
(Compact or compressed stranded conductor is acceptable.)

Marking: Manufacturer's name and type of insulation shall be clearly
shown in durable markings on the surface of the insulation
at intervals no greater than 24 inches.

av - Conductor, Service Cable
(Triplex and Quadruplex)

<u>Manufacturer</u>	<u>Aluminum</u>	<u>Copper</u>
Alcan Cable	x	x
Allied Tube & Conduit	x	x
Cablec	x	x
Conductor Products	x	
Essex	x	x
Hendrix	x	x
Kaiser	x	
Phillips Cables, Inc. (Marked "Phillips W")	x	
Pirelli Cable	x	x
Reynolds	x	
Rome Cable	x	x
Southwire	x	x

Applicable Specifications: REA Specification D-2, Specifications for
600 Volt Neutral-Supported Secondary Service
Drop Cables.

av-6
July 1985

av - Conductor, Aluminum Alloy

Applicable Specification: ASTM Specification B399

Preferred Sizes:

<u>DISTRIBUTION</u>		<u>TRANSMISSION</u>	
<u>6201</u>	<u>ACSR Equiv.</u>	<u>6201</u>	<u>ACSR Equiv.</u>
48,690 cmil - 7 str.*	4	123,300 cmil - 7 str.**	1/0
77,470 cmil - 7 str.*	2	155,400 cmil - 7 str.**	2/0
123,300 cmil - 7 str.	1/0	195,700 cmil - 7 str.**	3/0
155,400 cmil - 7 str.	2/0	246,900 cmil - 7 str.	4/0
195,700 cmil - 7 str.	3/0	312,800 cmil - 19 str.	266,800 cmil
246,900 cmil - 7 str.	4/0	394,500 cmil - 19 str.	336,400 cmil
		559,500 cmil - 19 str.	477,000 cmil
		652,400 cmil - 19 str.	556,500 cmil
		927,200 cmil - 37 str.	795,000 cmil

*Not recommended for multiphase lines with span lengths exceeding 300 ft.

**Not recommended for suspension type construction.

The following manufacturers have shown compliance with the applicable specifications:

<u>Manufacturer</u>	<u>Type</u>
Alcan	6201
Alcoa	6201
Kaiser	6201
Reynolds	6201
Southwire	6201

bu
January 1986

bu - Connector, grounding
for transformer or other equipment

<u>Manufacturer</u>	Copper <u>Alloy 1</u>	Plated Copper <u>Alloy 2</u>	Aluminum <u>Alloy 3</u>
Anderson/Square D	GTCL-23A	GTCL-23A-TP	
Blackburn	TTC-4	TTC2P	
Burndy	EQC632C	EQC632C-TN	
Dossert	TGCL8-50	TGCL8-50-SN	
Fargo	GC-207	GC-207P	GA-220
Penn-Union		GSE-C1TN	
Power Line Hardware	TGL-110	TGL-110P	
Tanner		GET-1-TN	
Weaver	TGC-4	TGC-2P	

1 - For use with copper type ground wire.

2 - For use with both copper and aluminum type ground wire.

3 - For use with aluminum type ground wire.

bv
July 1985

bv, Rods, armor

Aluminum or aluminum alloy rods for use on ACSR

Blackburn Formed Type

Dulmison Formed Type

Helical Line Products Formed Type

Preformed Line Products Formed Type

Copperweld rods for copper or CWC conductor

Helical Line Products Formed Type

Preformed Line Products Formed Type

Alumoweld rods for aluminum clad steel (Alumoweld)
overhead ground wire

Helical Line Products Formed Type

Preformed Line Products Formed Type

Bronze rods (10 inch length) for jumper protection

Preformed Line Products Formed Type

cg - Switch, air, three-pole, group-operated
NEMA standard switches for station and line structures

Manufacturer	Acceptable Mounting on Structures	Tilting Ins. Type	Ins. kV	Vertical Break Type	Side Break Type	Center Break Type	Double Break Type
Brown Boveri Electric (ITE)	Horizontal			TTR6	15-345		
A. B. Chance	Horizontal Phase over Vertical				D6(L)15-34.5 D6(L)15-34.5 D6(L)15-34.5		
Johnson	Horizontal			VIP	15-230	LS	15-69
Joslyn (Hi-Voltage)	Horizontal Horizontal			RF-2(VL)	15-230	RB-1(VL)	15-25 RB-1* 15-115
Kearney	Horizontal	NE-2	15-34.5	AR	60-P	15-69	
MEMCO	Horizontal Horizontal	AgF AgC	15-69 15-69	EA	15-345	EE	69-230
G & W Electric Co.	Horizontal			MK-40	15-69	PMB-40A	15-69
Powerdyne (Kearney)	Horizontal Phase over Phase					LPC	69-230
						V2-V4 V2	15-230 15-23

(L) Means gas or solid material full-load interrupters are accepted and available.

(VL) Means vacuum full-load interrupters are accepted and available.

*These switches may be purchased with reduced voltage vacuum interrupters and may be applied for loop sectionalizing duty when peak recovery voltage does not exceed 25 kV

NOTE: Phase-over-phase mounted switches are not acceptable above 25 kV class unless equipped with full-load interrupters. Switches of 15 kV and 25 kV classes with individual phases mounted on wood crossarms or poles must be supplied with insulated interphase and control rods.

cg - Switch, air, three-pole, group-operated
NEMA standard switches for station and line structures

Manufacturer	Acceptable Mounting on Structures	Tilting Ins. Type	Ins. kV	Vertical Break Type	Break kV	Side Break Type	Break kV	Center Break Type	Break kV	Double Break Type	Break kV
S & C	Horizontal Phase over Vertical			Allduti(L) 15-34.5 Allduti(L) 15-25 Allduti(L) *15-34.5	Allduti(L) 15-25 Allduti(L) 15-25 Allduti(L) 15-25					Allduti(L) 34.5-46 Allduti(L) 34.5-46 Allduti(L) *34.5-46	
SEECO	Phase over Phase					GOABS(VL)	15-69				
Siemens-Allis	Horizontal			TA(VL) 15-69 AVB(VL) *115-345	SSB-T 15-69			CCB-115-230 CBL-2 115-230			
Southern States	Horizontal			EV 15-230	57K 15-69			EC 115-230			
Turner	Phase over Phase Horizontal Horizontal			TH1(VL) 15-161	(1D, 2D, 3D)(VL) 15-161 1D(VL) 15-161						
USCO	Horizontal Horizontal Phase over Phase			AGT(VL) *15-230	GSH-4(VL) 15-138 GSH-4(VL) 15-138			AGCH- **15-345 AGCH-V**34.5-230 GCH 15-23			

(L) Means gas or solid material full-load interrupters are accepted and available.

(VL) Means vacuum full-load interrupters are accepted and available.

*These switches, except 34.5 kV Allduti vertical break, are available and accepted with the S & C type SMD substation fuse cutouts listed on page af-3.

** Also available in bronze in some ratings.

NOTE: Phase-over-phase mounted switches are not acceptable above 25 kV class unless equipped with full-load interrupters. Switches of 15 kV and 25 kV classes with individual phases mounted on wood crossarms or poles must be supplied with insulated interphase and control rods.

cu - Brace, crossarm, wood

Span, inches	60	60
Drop, inches	<u>18</u>	<u>30</u>
Aluma-Form	6018	6030
American Crossarm & Conduit Company	320	325
Brooks Lumber Company	44680	44681
Cascadian Company	15018	15030
Dis-Tran	DT-60	DT-601
Hatheway Patterson	320-R	325-R
Hughes Brothers	2045-CC	2045-D
Joslyn	J4760R	J4730W-R
Utilities Structures Engineering Incorporated	CU-60-18	CU-60-30

Braces listed below have 26-inch hole spacing. They are interchangeable with the flat steel braces listed on page h.

Aluma-Form	AF626
American Crossarm & Conduit	600
Brooks Lumber Company	58128
Dis-Tran	DT-28
Hatheway Patterson	7026
Hughes Brothers	2023
Joslyn	J5526

Brace, crossarm, fiber reinforced plastic

Continental	CRB-28
Hughes Brothers	533
Joslyn	RP-26
Tranpol	CAB-28
Stanley Flagg	FCB26

CX
July 1985

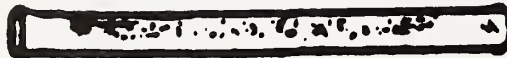
cx - Splice, oval tube

Copper

<u>Conductor Size:</u>	<u>0 x 7</u>	<u>2 x 3</u>	<u>4</u>	<u>6</u>
National Tel. Supply	464	463	459	457

Copperweld-Copper

<u>Conductor Size:</u>	<u>6A</u>	<u>8A</u>
National Tel. Supply	460	459



da
July 1985

da - Bracket, insulated

	<u>Bracket without Insulator</u>	<u>Bracket with 1-3/4" Spool Insulator</u>	<u>Bracket with 3" Spool Insulator</u>
Chance	0327	0327-C909-1032	0327-C909-1034
Dixie	D0327	-	-
Joslyn	J1300	J1301	J1303
Kortick	K9278	K9081	K9082
McGraw-Edison	DC2C1	-	-
Hughes Brothers	1077LI	1077SI	1077I

dh
January 1986

dh - Ground, pole

(For system grounds see ground rods on page ai.)

Manufacturer

Catalog Number

Galvanized Steel Plate With Insulated
Copper Lead

(For connecting to a copper or aluminum
ground wire above ground.)

Joslyn
Power Line Hardware

J055W
PGPS-56CL8

Galvanized Steel Plate with Connector
(For connecting to a galvanized iron ground wire)

Joslyn

J055

McGraw-Edison

DN13M1

Power Line Hardware

PGPS-56C

Copper Plate

Blackburn
Drabco
Homac
Power Line Hardware
Weaver

GP-100
D 101
5575
PGPC-56
PBH

dt
July 1985

dt - Deadend, service

For deadending triplex type service cable, Drawing K10C.

<u>Manufacturer</u>	<u>ACSR Size</u>	<u>Wedge Type</u>	<u>Catalog Number</u> <u>Formed Type</u>
Blackburn	4	W6-4AA	-
	2	W6-2AA	-
	1/0	W2-0AA	-
Burndy	4	CW2R-1	-
Chance	4	-	CSG-030
	2	-	CSG-050
	1/0	-	CSG-070
Helical Line Products	4	-	HSG-514
	2	-	HSG-518
	1/0	-	HSG-522
Joslyn	4 & 2	R7295	-
	1/0	R7287	-
Penn-Union	4 & 2	WDC-2S	-
	1/0	WDC-10S	-
Preformed Line Products	4	-	SG-4502
	2	-	SG-4504
	1/0	-	SG-4506
Reliable	4 & 2	7295	-
	1/0	7287	-

du
January 1986

du - Link, Extension

DISTRIBUTION

<u>Manufacturer</u>	<u>Catalog Number</u>
Bethea Electrical	LCE-14
Chance	C207-0112
Continental	CEL-14
Flagg (MIF)	PA319
McGraw-Edison	DC33B6
Utilities Service	495

TRANSMISSION
(25,000 lbs. min. strength)

Bethea Electrical Products	ASM 7209-1-BC
Joslyn	J26082

Guy Extension Link
(For "H" Structure)

<u>Manufacturer</u>	<u>One Guy Attachment</u>	<u>Two Guy Attachment</u>
Joslyn	J22421	J26025

NOTE: The distribution extension links may be substituted for anchor shackle (Item bo), eye bolt (Item o) and eye nut (Item aa) for both small and large conductor drawings shown in REA Form 803 and REA Bulletin 50-3 at the option of the owner.

dz
July 1985

dz - Clip, Guy Wire

<u>Manufacturer</u>	<u>5/16"</u>	<u>3/8"</u>	<u>7/16"</u>	<u>1/2"</u>
Chance	6453	6454	6455	6456
McGraw-Edison	DJ17C6	DJ17C8	DJ17C10	DJ17C12
Utilities Service	4953	4954	4955	4956

ea-1
January 1986

ea - Insulator and Stud, post type

DISTRIBUTION

System voltage, kV	12.5/7.2*	12.5/7.2*	24.9/14.4**
Leakage, inches	7-1/2	10	15
Flashover, dry, kV	65	70	95
Flashover, wet, kV	<u>40</u>	<u>50</u>	<u>65</u>
<u>Chance</u>			
7" Stud	C903-1910-04	C903-1911-04	C903-1912-04
1-3/4" Stud	C903-1910-05	C903-1911-05	C903-1912-05
<u>Lapp</u>			
7" Stud	4415P	4420P	4427P
1-3/4" Stud	4315P	4320P	4327P
<u>Ohio Brass</u>			
7" Stud		43400-7040	43401-7040
1-3/4" Stud		43400-7010	43401-7010
<u>Porcelain Products (Knox)</u>			
7" Stud	5115-6510	5120-6510	5127-6510
1-3/4" Stud	5115-6500	5120-6500	5127-6500

TRANSMISSION

System voltage, kV	22	34.5	46
ANSI Class	57-2	57-3	57-4
Flashover, dry, kV	110	125	150
Flashover, wet, kV	<u>85</u>	<u>100</u>	<u>125</u>
<u>Chance</u>			
7" Stud	C903-1002-04	C903-1003-04	
1-3/4" Stud	C903-1002-05	C903-1003-05	
<u>Lapp</u>			
7" Stud	9435	9445	9455
1-3/4" Stud	9335	9345	9355
<u>Ohio Brass</u>			
7" Stud	37620-7040	41640-7040	41650-7040
1-3/4" Stud	37620-7010	41640-7010	41650-7010
<u>Porcelain Products (Knox)</u>			
7" Stud	5135-6512		
1-3/4" Stud	5135-6502		

NOTE: Post Insulators (item ea) may be substituted for the crossarm pin (Item f) and pin insulator (Item a) for both small and large conductor distribution drawings shown in REA Form 803 at the option of the owner.

*The transverse loading on these insulators shall not exceed the lower of 40 percent of the insulator's ultimate strength and the maximum transverse loading given for the structure in REA Bulletin 50-3.

**The transverse loading on these insulators shall not exceed 40% of the insulations' ultimate strength.

eq - Narrow Profile Brackets and Special Arm Assemblies
(See REA Bulletin 61-12)

FIBERGLASS REINFORCED PLASTIC

For 24.9/14.4 kV

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Chance</u>		
Two-phase pin bracket C653-0987	1049(9/5/74)	1. To obtain experience.
Standoff insulator C653-0988		2. For use only in scenic areas and locations where right-of-way is limited.
Deadend arm C653-1024	1041(6/15/78)	3. Not to be used where conductor galloping may be expected.
		4. Not to be used in con- taminated atmospheres.
<u>Continental</u>		
Two-phase pin bracket GPB2-568M-44--V-1.375	1181(2/14/80)	Same as above.
Two-phase pin bracket GPB2-558H-48-V-1.375	1272(1/5/84)	
Standoff insulator GPB-58M-19-V-1.375		
Standoff insulator GPB-58H-20-V-1.375		
Standoff bracket GIACB-58M-18		
Deadend arm GDEA-58-3.0-48-2E		
<u>Hughes Brothers</u>		
Deadend arm, 540-48	1063 (4/17/75)	Same as above.
Standoff insulator, 880-20	1081 (1/8/76)	
Two-phase pin bracket, 883-48	1089 (4/29/76)	
Standoff insulator, 870-19	1294 (2/14/85)	
Two-phase pin bracket, 862-44		
Standoff bracket, 892-18		

Conditional List
eq(2.3)
January 1986

eq - Narrow Profile Brackets and Special Arm Assemblies
(See REA Bulletin 61-12)

FIBERGLASS REINFORCED PLASTIC

For 24.9/14.4 kV

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Bethea Electrical Products</u>		
Standoff insulator bracket 6882-18P	1285 8/16/84	<ol style="list-style-type: none">1. To obtain experience.2. For use only in scenic areas and locations where right-of-way is limited.3. Not to be used where conductor galloping may be expected.4. Not to be used in contaminated atmospheres.
Standoff Insulator Bracket 6744-19P-1.375		
Standoff insulator bracket 6748-20P-1.375		
Two-phase pin bracket 6742-44P-1.375		
Two-phase pin bracket 6747-48P-1.375		
<u>Flagg (MIF)</u>		
Standoff insulator 7581-120X	1201 12/4/80	Same as above.
Standoff insulator 7561-118X		
Two-phase pin bracket 7561-448X	1272 1/5/84	
Standoff bracket 7561-218		
Deadend arm 7554-648-4E		

es
July 1985

es - Splice Cover, Plastic

(For use over compression type service connections
in place of tape.)

<u>Manufacturer</u>	<u>Type</u>
Anderson/Square D	Type SEC
Blackburn	Type C
Kearney	Type 601
3M	PST Series 8400
Plastic Engineering & Sales Co.	Wire Splice Cover
Virginia Plastics	Type VP

Splice Cover and Moisture Seal for
Secondary Cable Connections (See
Drawings G312 and UM5)

<u>Manufacturer</u>	<u>Type</u>
AMP	Sealing & Dielectric Compound
Bishop	Electro-Seal
3M	Scotch Brand #2200

Bolted Connector Cover

(For use over bolted type service connections in place of tape.)

<u>Manufacturer</u>	<u>Type</u>
Fargo	GA-9000 B Series

eu
January 1986

eu - Extension Link
(Fiberglass)
(Distribution)

<u>Manufacturer</u>	<u>Strength</u>	<u>Catalog Number</u>
Anderson/Square D	10,000 lbs. 15,000 lbs.	*GSB1-9 GSB2-12
Barron Bethea	11,000 lbs. 15,000 lbs.	*BB-11-EE-12 BB-15-EE-12
Bethea Electrical Products	11,000 lbs. 15,000 lbs.	FGS16-EE-12P FGS16-EE-12P
Continental	11,000 lbs. 15,000 lbs.	*GEE11-12 GEE15-12
Flagg (MIF)	11,000 lbs. 15,000 lbs.	150-12EE 150-12EE
Joslyn-Empire	15,000 lbs.	500-12EE
Tranpol	11,000 lbs. 15,000 lbs.	*HSB-1-12 HSB-2X-12

*For use with 6" suspension insulators.

ga - Watthour and Watthour-Demand Meters

10, 2 and 3 wire or 2/3 wire 120/240 volts

ga-1
Oct. 1985

Self-Contained Types

Manufacturer	Type of Base	Watthour		Mechanical Demand		Thermal Demand		Number of Terminals
		Meter Type	Watthour Type	Watthour Type	Watthour Type	Watthour Type	Watthour Type	
1	2	3	4	5	6			
Duncan	Bottom Con.	-	-	-	-			
	Socket	MS	BMS-2S	TMS	4			
General Electric	Bottom Con.	I50A	IM50A	-	4			
	Socket	I70S	IM70S	-	4			
Sangamo	Bottom Con.	J5SA	J5DSA	-	-			
	Socket	J5S	J5DS	-	4			
Westinghouse	Bottom Con.	D2A	D2AM	-	-			
	Socket	D5S	D5SM	D2SH	4			

Transformer Rated Types

Duncan	Bottom Con.	-	-	-	-			
	Socket	MS	BMS	TMS	5 or 6			
General Electric	Bottom Con.	I50A	IM50A	-	5 or 6			
	Socket	I70S	IM70S	-	5 or 6			
Sangamo	Bottom Con.	J5SA	J5DSA	-	-			
	Socket	J5S	J5DS	-	5 or 6			
Westinghouse	Bottom Con.	D2A	D2AM	-	-			
	Socket	D2S	D2SM	-	5 or 6			

ga - Watthour and Watthour-Demand Meters
Polyphase 2 element - 3 wire, 240 volts - Delta and 120/208 Volts Network

<u>Self-Contained Types</u>					
1 Manufacturer	2 Type of Base	3 Watthour Meter Type	4 Mechanical Demand Watthour Type	5 Thermal Demand Watthour Type	6 Number of Terminals
Duncan	Bottom Con. Socket	MT012S or 13S	BMT-12S or 13S	TMT-12S	5 or 8
General Electric	Bottom Con. Socket	V62A V62S	VM62A VM62S	-	5
Sangamo	Bottom Con. Socket	S2A S2S S12S	S2DA S2DS S12DS	-	5 or 8
Westinghouse	Bottom Con. Socket	- D5S5	- D5S5M	-	-
<u>Transformer Rated Types</u>					
Duncan	Bottom Con. Socket	MT-5A MT-5S	BMT-5A BMT-5S	TMT-5A TMT-5S	8
General Electric	Bottom Con. Socket	V63A V63S	VM63A VM63S	-	8
Sangamo	Bottom Con. Socket	S3A S3S	S3DA S4DS	-	-
Westinghouse	Bottom Con. Socket	D5A-2 D5S-2	D5A2M D5S2M	- D4S-2H	- 8

sb - Switch, disconnect (single-pole, hook operated station class)

NEMA standard switches for station or line
structure use where single-pole switching is permissible

<u>Manufacturer</u>	<u>Type</u>	<u>Voltage Ratings</u>	<u>System Voltages Line to Line</u>
Bridges	EH EHL(L)	15 thru 69 kV 15 thru 34.5 kV	12.5 thru 69 kV 12.5 thru 34.5 kV
Brown Boveri Electric (ITE)	HPL	15 thru 69 kV	12.5 thru 69 kV
G & W Electric	B-2M EV(PL)	15 thru 69 kV 15 thru 34.5 kV	12.5 thru 69 kV 12.5 thru 34.5 kV
Hi-Voltage (Joslyn)	HU HI	15 thru 34.5 kV 15 thru 34.5 kV	12.5 thru 34.5 kV 12.5 thru 34.5 kV
Johnson	HPT	15 thru 69 kV	12.5 thru 69 kV
Kearney	M-72(PL) H-72	15 thru 69 kV 15 thru 34.5 kV	12.5 thru 69 kV 12.5 thru 34.5 kV
McGraw-Edison	D2(PL)	15 and 23 kV	12.5, 13.2, 24.9 kV
MEMCO	STV STU	15 thru 69 kV 15 thru 69 kV	12.5 thru 69 kV 12.5 thru 69 kV
Morgan	DHS(PL)	15 thru 69 kV	12.5 thru 69 kV
ITT Royal Switchgear	BT BLT(PL)	15 thru 69 kV 15 and 23 kV	12.5 thru 69 kV 12.5 thru 24.9 kV
S & C	LBD(PL) Alduti (L)	15 thru 34.5 kV 15 and 25 kV	12.5 thru 34.5 kV 12.5 thru 24.9 kV
Seeco	BT	34.5 thru 69 kV	34.5 thru 69 kV
Siemens-Allis	HA HS(PL)	15 thru 69 kV 15 and 25 kV	12.5 thru 69 kV 12.5 thru 24.9 kV

(L) Means solid material load interrupters are available and accepted.

(LV) Means vacuum interrupters are available and accepted.

(PL) Means hooks for portable load interrupters are available for voltages 34.5 kV and below. Consult switch manufacturer concerning loop switching applications at higher voltages.

sb - Switch, disconnect (single-pole, hook-operated station class)

NEMA standard switches for station or line
structure use where single-pole switching is permissible

<u>Manufacturer</u>	<u>Type</u>	<u>Voltage Ratings</u>	<u>System Voltages Line-to-Line</u>
Southern States	PBO	15 thru 69 kV	12.5 thru 69 kV
	*PBN	15 thru 23 kV	12.5, 13.2, 24.9 kV
USCO	HH(PL)	15 thru 69 kV	12.5 thru 69 kV

(L) Means solid material load interrupters are available and accepted.

(LV) Means vacuum interrupters are available and accepted.

* With steel base only.

(PL) Means hooks for portable load interrupters are available for voltages 34.5 kV and below. Consult switch manufacturer concerning loop switching applications at higher voltages.

sb - Switch, disconnect (single-pole, hook operated
distribution class)*

For distribution line use where power class insulation is not required and
single-phase switching is permissible.

(Not suitable for substation use)

<u>Manufacturer</u>	<u>Type</u>	<u>Voltage Rating</u>	<u>System Voltage Line-to-Line</u>
Chance	M3(PL)	15 and 27 kV	12.5 thru 24.9 kV
G & W Electric Company	EV(PL)	15 kV	12.5 kV
Kearney	D-73(PL)	15 and 23 kV	12.5, 13.2, 24.9 kV
McGraw-Edison	D2(PL)	15 and 25 kV	12.5, 13.2, 24.9 kV
Morgan	DHS (PL)	15 and 23 kV	12.5, 13.2, 24.9 kV
ITT Royal	BLT(PL)	15 and 23 kV	12.5, 13.2, 24.9 kV
S & C	LBD (PL)	15 and 25 kV	12.5, 13.2, 24.9 kV
Siemens-Allis	HD(PL)	15 and 25 kV	12.5 thru 24.9 kV

NOTE: Switches on this page must be furnished with four bolts for double
crossarm mounting.

(L) Means solid material load interrupters are available and accepted.

(PL) Means hooks for portable load interrupters are available.

(LV) Means vacuum interrupters are available and accepted.

*Steel bases only.

Conditional List
sb(1)
July 1985

sb - Switch, hookstick
(line tension switches)

for use on 12.5/7.2 kV systems only

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Bridges</u>		
125	1279 (5/3/84)	To obtain experience.
<u>Chance</u>		
LTD06150-H	1279 (5/3/84)	To obtain experience.

NOTE: All switches listed on this page have hooks for portable load interrupters.

U ae - Arresters, Surge

(For underground system pole risers or pad-mounted equipment)

(Shielded for Underground System Pad-Mounted Equipment)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Joslyn</u>		
Metal Oxide, elbow Arrester Type ZE, 10, 18kV	1297 4/11/85	To obtain experience
<u>McGraw-Edison</u>		
Metal oxide, AMOV1 U.D. 10, 18 kV	1223 11/19/81	To obtain experience.
<u>RTE</u>		
Metal Oxide Elbow Arrester M.O.V.E. 9, 18 kV	1185 4/24/81	To obtain experience.

(For Underground System Pole Risers)

<u>General Electric</u>		
Metal Oxide, Tranquell** U.D. II 9, 10, 18 kV	1292 1/10/85	To obtain experience.
Metal Oxide, Tranquell Intermediate Class 9, 10, 18 kV	1197 10/9/80	To obtain experience.
<u>Joslyn</u>		
Metal Oxide, Type ZJ U.D. 9, 10, 18 kV	1266 9/22/83	To obtain experience.
Metal Oxide, Type ZR Intermediate Class* 9, 10, 18 kV	1266 9/22/83	To obtain experience.
<u>McGraw-Edison</u>		
Metal Oxide, AVZ 1B 9/10, 18 kV	1223 11/9/81	To obtain experience.
Metal Oxide AZR Intermediate class 10, 18 kV	1287 9/27/84	To obtain experience.
<u>Ohio Brass</u>		
Metal Oxide, DynaVar VR UD 9, 10, 18 kV	1236 6/10/82	To obtain experience.
Metal Oxide, DynaVar Intermediate Class 9, 10, 18 kV	1236 6/10/82	To obtain experience.

*Has intermediate class arrester characteristics but does not have intermediate class venting capability.

**A non fragmenting U.D. II Arrester is available for 9 & 10 kV designs at higher cost when specified.

U an-1.1
July 1985

U an - Transformers, distribution
pad-mounted, dead-front

(For underground application)

Applicable Specifications: "REA Specifications for Pad-Mounted
Transformers," U-5.

<u>Manufacturer</u>	<u>Single Phase</u>	<u>Three-Phase</u>
Central Moloney (2, 4)	"REA-LP" 25-167 kVA	
Dowzer (3, 4)	"METRI-PAD" 25-167	"PM3W-R" 75-500 KVA
ERMCO (1) (4, 6) (2, 4)	"Trimline" 10-50 kVA "Low-Profile" 10-50 kVA "Low-Profile" 75 kVA	
General Electric (2, 4)	"Mini-Pad III - REA" 10-167 kVA	"Compad II - REA" 75-2500 kVA
Howard (2, 4)	"Hi Pad REA" 10-167 kVA	"Hi Pad 3 REA" 45-2500 kVA
Kuhlman (2, 4)	"Lo-Pak ALR" 25-167 kVA	
McGraw-Edison (2, 4)	Series 20/20 REA 25-167 kVA	"REA Pad-Mount" 75-2500 kVA
NECO/Hammond (2)	HMM-R, 10-50 kVA SP-R, 75-167 kVA	TP-R, 45-1000 kVA
Pauwels-Chance(2)	"Turf-Hugger-R" 10-100 KVA	"Turf-hugger-R" 45-500 KVA
H. K. Porter (2, 4) (Delta-Star)	"Low Profile U 5-R" 25-167 kVA	"Porter U5-R3" 225-2500 kVA
RTE (2, 4)	"REA Shrubline" 15-167 kVA	"REA Terra-Tran" 45-2500 kVA
United (Ky, AEC)(2, 4)	"Pad-Mount" 15-75 kVA	

(1) 7.2/12.5 and 7.6/13.2 kV

(2) 7.2/12.5, 7.6/13.2 and 14.4/24.9 kV

(3) 7.2/12.5 and 7.6/13.2 kV (conditional listing for 14.4/24.9 kV)

(4) Dual Voltage - Same as for 14.4/24.9 kV, single phase

(5) Three-phase listing applies to 7.2/12.5 and 7.6/13.2 kV only

(6) 14.4/24.9 kV

U gv
July 1985

U gv - Stake, Power Pedestal
Refer to Construction Drawing UK5

<u>Manufacturer</u>	<u>Length Inches</u>	<u>Catalog No.</u>	
		<u>For Power Pedestal Only</u>	<u>For Joint Pedestal</u>
Fargo	42-60-72-78	UP-530S Series	UP-530J Series
Nordic	48-60-72	PM Series	
Utility Prod.	72-78-84	DM Series	DM Series

Conditional List
U hb(1)
January 1986

U hb - Cable Accessories
(When ordering specify conductor size, type whether
copper or aluminum and insulation diameter)

200 Ampere Continuous Current Rating

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Blackburn</u>		
15 kV, used with loadbreak connectors	1012 (3/15/73)	To obtain experience.
Type ABOC insulating cap	1042 (5/30/74)	
Type JLB2BA bushing plug*		
25 kV, used with non- loadbreak connectors	1110 (3/17/77)	
Type LB2CA bushing plug	1193 (8/21/80)	
Type ABOCC insulating cap		
<u>Elastimold (ESNA)</u>		
15 kV, used with loadbreak connectors	921 (6/26/69)	To obtain experience.
Style 1601-CL cable lead		
Style 1602A3R feedthru insert*	1171 (9/6/79)	
Style 1601-A3R bushing plug*		
Style 160-DR insulating cap	924 (8/7/69)	
Style 1601CIBA3R	1174 (10/18/79)	
15 kV, used with non-loadbreak connectors	921 (6/26/69)	
Style 1501-A1 bushing plug		
Style 150-DP deadend plug	842 (6/2/66)	
Style 150-DR deadend receptacle		
25 kV, used with loadbreak connectors	1232 (4/8/82)	
Style 2701-A2 bushing plug*		
25 kV, used with non-loadbreak connectors	921 (6/26/69)	
Style K-1501-A1 bushing plug		
Style k-150-DR deadend recept- acle 25 kV used with loadbreak connectors	945 (6/11/70)	
Style 270-DR deadend receptacle	1199 (11/6/80)	

*Asterisk indicates single or three phase. Other bushing plugs for use with
loadbreak connectors are single phase only.

U hb - Cable Accessories

(When ordering, specify conductor size, type, whether
copper or aluminum and insulation diameter)

600 Ampere Continuous Current Rating

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Elastimold (ESNA)</u>		
15 kV, used with non- loadbreak connectors 600, 650 Series	1016 5/10/73	To obtain experience
25 kV, used with non- loadbreak connectors K600, K650 Series		
35 kV, used with non- loadbreak connectors 750LR Series	1064 5/1/75	
<u>RTE</u>		
15 kV, VBT Tee connectors No. 2604360B Series	1126 11/3/77	To obtain experience
15 kV, Protective cap No. 2625041A01		
15 kV, deadbreak termination system-T61 Series-optional 200 A. loadbreak tap	1309 11/14/85	To obtain experience
25 kV, deadbreak termination system-T62 Series-optional 200A. loadbreak tap		
35 kV, deadbreak termination system-T63 Series optional 200 A. loadbreak tap		
<u>Blackburn</u>		
15 kV, used with non- loadbreak connectors Types 6B and 65B	1131 1/19/78	To obtain experience
25 kV, used with non- loadbreak connectors Types 6C and 65C		
<u>Joslyn</u>		
15 kV, used with non- loadbreak connectors PES86/PSS86	1197 10/9/80	To obtain experience
25 kV, used with non- loadbreak connectors PES86--S/PSS86--S	1296 3/28/85	

Conditional List

U hb(3)

July 1985

U hb - Cable Accessories

(When ordering specify insulation diameter)

Concentric Neutral Clamps (Bonding)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Reliable</u> Concentric neutral bonding clamp (Nos. 2329 & 2330)	1037 (3/21/74)	1. To obtain experience 2. Only for bonding of anodes or other metals to the neutrals of <u>existing</u> cable installations. 3. Not to be used to connect neutral to grounding electrodes
<u>Harco</u> URD cable clamp	1114 (5/12/77)	Same as above

Conditional List

U hp(1)

July 1985

U hp - Terminations, Elbow*

When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Burndy</u>		
15 kV, Loadbreak		
LBT 112 (without test point)	1144 (8/3/78)	To obtain experience.
LBT 112-T (with test point)		
25 kV, Loadbreak	1211 (4/30/81)	
LBT 262M (without test point)		
LBT 262TM (With test point)		
25 kV, Non-Loadbreak		
DBT 252T (with test point)		
<u>Elastimold (ESNA)</u>		
15 kV		
Style 154-LR (non-loadbreak with voltage test point)	945 (6/11/70)	To obtain experience.
Style 163-LR (Loadbreak without voltage test point)		
Style 164-LR (Loadbreak with voltage test point)		
25 kV		
Style K-154-LR (non-loadbreak with voltage test point)	945 6/11/70)	
Style 271-LR (Loadbreak without voltage test point)	1068 (6/26/75)	
Style 272-LR (loadbreak with voltage test point)		
35 kV		
Style 354-LR (non-loadbreak with voltage test point)	1064 (5/1/75)	

*NOTE: Non-loadbreak devices require that connections be made in non-energized conditions only.

For applications of loadbreak elbows on three-phase systems, refer to REA Bulletin 61-15 dated June 1974.

Conditional List
U hp(2)
January 1986

U hp - Terminations, Elbow*

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
General Electric		
15 kV, Loadbreak	930 (10/30/69)	To obtain experience.
Elbow connector module		
9U01 Series		
25 kV	1016 (5/10/73)	
9U01BAA Series (Loadbreak		
with voltage test point)		
9U01BBA Series (Loadbreak		
without voltage test point)		
<u>Blackburn</u>		
25 kV, Non-loadbreak		To obtain experience.
T2CT (with test point)	1037 (3/21/74)	

*NOTE: Non-loadbreak devices require that connections be made in non-energized
conditions only.

For application of loadbreak elbows on three-phase systems, refer to
REA Bulletin 61-15 dated June 1974.

Conditional List

U hp(3)

July 1985

U hp - Terminations, Elbow*

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
RTE		
15 kV Loadbreak SBT IV	1122 (9/8/77)	To obtain experience.
2604000B Series with test point		
2603999B Series without test point		
15 kV Non-loadbreak	1148 (9/28/78)	
2625166B Series		
2625175B Series		
2525175B Series		
25 kV Loadbreak SBT	1032 (12/20/73)	
2604381B Series with test point		
2604400B Series without test point		
35 kV Loadbreak SBT	1048 (8/22/74)	
2603922B Series with test point		
2604006B Series without test point		

*NOTE: Non-loadbreak devices require that connections be made in non-energized
conditions only.

For application of loadbreak elbows on three-phase systems, refer to REA
Bulletin 61-15 dated June 1974.

Conditional List
U hp(4)
January 1986

U hp - Terminations, Elbow
(rated for switching on three-phase systems)

(When ordering, specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Kearney</u>		
15 kV, Loadbreak with voltage test point	1005 (12/7/72)	To obtain experience.
1115-FC Series	1077 (11/13/75)	
<u>RTE</u>		
15 kV, Loadbreak SBT IV 2604600B Series with test point	1032 (12/20/73)	To obtain experience.
2604599B Series without test point	1122 (9/8/77)	
25 kV, Loadbreak SBT 2604740B Series with test point	1148 (9/28/78)	
2604741B Series without test point		
<u>Elastimold (ESNA)</u>		
15 kV, Loadbreak without voltage test point Style 165-LR	1068 (6/26/75)	To obtain experience.
15 kV, Loadbreak with voltage test point Style 166-LR		
25 kV, Loadbreak without voltage test point Style 271-LR		
25 kV, Loadbreak with voltage test point Style 272-LR		
<u>General Electric</u>		
15 kV, Loadbreak 9U01A--4--Series	1133 (2/16/78)	To obtain experience.
25 kV, Loadbreak 9U01B--5--Series		
<u>Blackburn</u>		
15 kV, Loadbreak JT2B (without test point)	1054 (11/27/74)	To obtain experience.
JT2BT (with test point)	1311 (12/19/85)	
25 kV Loadbreak JT2C (without test point)	1304 (8/8/85)	To obtain experience.
JT2CT (with test point)		

Conditional List
U hp(5)
July 1985

U hp - Terminations, Elbow
(rated for switching on three-phase systems)

(When ordering, specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Burndy</u>		
15 kV, Loadbreak		
LBT112M (without test point)	1162 (4/26/79)	To obtain experience.
LBT112MT (with test point)	1165 (6/7/79)	
25 kV, Loadbreak		
LBT262M (without test point)	1240 (8/12/82)	To obtain experience.
LBT262TM (with test point)		
15 kV, Fused Loadbreak		
SPF-T (with test point)	1251 (1/20/83)	To obtain experience.

Conditional List
U hq(1)
January 1986

U hq - Terminations, Multipoint

Use with Loadbreak Connectors

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Elastimold (ESNA)</u>		
15 kV		
2-way bushing, 163J2*	1068 (6/26/75)	To obtain experience.
3-way bushing, 163J3*	1068 (6/26/75)	
3-way bushing, 1601-J3	921 (6/26/69)	
4-way bushing, 163J4*	1068 (6/26/75)	
4-way bushing, 1601-J4	945 (6/11/70)	
<u>RTE</u>		
LBC-2, 2-way bushing, 15 kV	924 (8/7/66)	To obtain experience.
2600730C04 - single phase		
2604883B01 - three phase		
LBC-3, 3-way bushing, 15 kV	1126 (11/3/77)	
2600730C08 - single phase		
2604883B02 - three phase		
LBC-4, 4 way bushing, 15 kV		
2600730C12 - single phase		
2604883B03 - three phase		
LBC-2, 2-way bushing, 25 kV	1148 (9/28/78)	
2604954B01 - three phase		
LBC-3, 3-way bushing, 25 kV		
2604954B02 - three phase		
LBC-4, 4-way bushing, 25 kV		
260495B03 - three phase		
<u>General Electric</u>		
15 kV*		
2-way bushing 9U07A--2-0	1131 (1/19/78)	To obtain experience.
3-way bushing 9U07A--3-0		
4-way bushing 9U07A--4-0	1158 (3/1/79)	
25 kV*		
2-way bushing 9U07B--2-0	1016 (5/10/73)	
3-way bushing 9U07B--3-0		
4-way bushing 9U07B--4-0	1158 (3/1/79)	
<u>Blackburn</u>		
JJ2BA* (2, 3, 4-way) 15 kV	1110 (3/17/77)	To obtain experience.

*NOTE: Asterisk indicates single or three phase. Other termination for use
with loadbreak connectors are single phase only.

U hv - Cable, Underground
15 kV Cable

Applicable Specification: REA Specification U-1
Conductor :Copper or Aluminum
 #2 AWG through 1000 kcmil
Insulation :High Molecular Weight (HMW) or Crosslinked (XL)
 Polyethylene or Ethylene Propylene Rubber (EPR)
Neutral :Copper Concentric Neutral

<u>Manufacturer</u>	<u>Insulation</u>	<u>Flat Strap Neutral Available</u>	<u>Stabilized Neutral Design*</u>
Cablec	XL	Yes	R-LOK
Conductor Prod.	HMW or XL	Yes	Ridg-lok
Hendrix	HMW, XL or EPR	No	Neu-lok
Okonite	XL or EPR	Yes	
Pirelli	HMW or XL	Yes	STA-SERVE
Reynolds	HMW,XL, or EPR	Yes	Secure-Neutral
Rome	XL or EPR	Yes	Serve-Lock Counter Secure
Southwire	XL	No	

*Accepted design meeting the requirements of paragraph 7.5.2. of REA Specification U-1, for a minimum neutral with a maximum lay.

U hv-2
January 1986

U hv - Cable, Underground
25 kV Cable

Applicable Specification: REA Specification U-1
Conductor : Copper or Aluminum
 #1 AWG through 1000 kcmil
Insulation : High Molecular Weight (HMW) or Crosslinked (XL)
 Polyethylene or Ethylene Propylene Rubber (EPR)
Neutral : Copper Concentric Neutral

<u>Manufacturer</u>	<u>Insulation</u>	<u>Flat Strap Neutral Available</u>	<u>Stabilized Neutral Design*</u>
Anaconda Power Cable	XL	No	
Cablec	XL	Yes	R-LOK
Conductor Prod.	HMW or XL	Yes	Ridg-lok
Hendrix	HMW, XL or EPR	No	Neu-lok
Okonite	XL or EPR	Yes	
Pirelli	HMW or XL	Yes	STA-SERVE
Reynolds	HMW,XL, or EPR	Yes	Secure-Neutral
Rome	XL or EPR	Yes	Serve-lock Counter-Secure
Southwire	XL	No	

*Accepted design meeting the requirements of paragraph 7.5.2. of REA Specification U-1, for a minimum neutral with a maximum lay.

U hv - Cable, Underground

600 Volt Cable

Applicable Specification: REA Specification U-2
Conductor : Copper, #4 AWG and larger
Aluminum, #2 AWG and larger
Insulation : Cross-Linked polyethylene (XLPE)

<u>Manufacturer</u>	<u>Type Conductor</u>
Alcan	Copper or Aluminum
Anaconda Power Cable	Copper or Aluminum
Cablec	Copper or Aluminum
Collyer	Copper or Aluminum
Conductor Products	Aluminum
Essex	Copper or Aluminum
General Electric	Copper or Aluminum
Hatfield	Copper
Kaiser	Aluminum
Okonite	Copper or Aluminum
Phelps Dodge	Copper or Aluminum
Phillips Cables, Inc. (Marked "Phillips W")	Copper or Aluminum
Pirelli	Copper or Aluminum
Reynolds	Copper or Aluminum
Rome Cable	Copper or Aluminum
Southwire	Copper or Aluminum

NOTE: The manufacturers shown above have indicated that their 600 volt cable is suitable for use on 480 volt corner grounded delta circuits.

The above cable may be supplied with UL label for Type USE.

U hv-4
January 1986

U hv - Cable, Underground
600 Volt Multi-Conductor Cable

Applicable Specification: REA Specification U-2
Conductor : Copper, #4 AWG and larger
Aluminum, #2 AWG and larger
Insulation : Cross-Linked polyethylene (XLPE)
Cable Configuration : 3 Insulated Conductors Triplexed

<u>Manufacturer</u>	<u>Type Conductor</u>
Alcan	Copper or Aluminum
Anaconda Power Cable	Copper or Aluminum
Cablec	Copper or Aluminum
Conductor Products	Aluminum
Essex	Copper or Aluminum
General Electric	Copper or Aluminum
Hatfield	Copper
Kaiser	Aluminum
Okonite	Copper or Aluminum
Phillips Cables, Inc. (Marked "Phillips W")	Copper or Aluminum
Pirelli	Copper or Aluminum
Reynolds	Copper or Aluminum
Rome Cable	Copper or Aluminum
Southwire	Copper or Aluminum

The above cable may be supplied with UL label for Type USE.

U hv - Cable Underground
15 kV and 25 kV Concentric Neutral Jacketed Cable

Applicable Specification: REA Specification U-1
Conductor : Copper or Aluminum
For 15 kV Cable, #2 through 1000 kcmil
For 25 kV Cable, #1 through 1000 kcmil
Insulation : High Molecular Weight (HMW) or Crosslinked (XL)
Polyethylene or Ethylene Propylene Rubber (EPR)
Neutral : Copper Concentric Neutral
Jacket : High Molecular Weight (HMW) Polyethylene

<u>Manufacturer</u>	<u>Insulation</u>
Cablec	XL
Conductor Products, Inc.	HMW or XL
Hendrix	HMW, XL, or EPR
Okonite	XL or EPR
Pirelli	HMW or XL
Reynolds	HMW, XL, or EPR

NOTE: For grounding purposes insulated jacketed cables must be treated like overhead lines, i.e., at least four ground rods must be installed per mile in accordance with the NESC. (This does not include service grounds, etc., but does include equipment grounds.) Additional grounding may be necessary in soils with higher resistivity. In splices or tap connections, a good seal should be achieved to exclude moisture.

It is recommended that any place that the jacketing is cut (including the connections to ground rods), it be done above ground in a pedestal.

U hv - Cable, Underground
(15 or 25 kV cable)

TREE RETARDANT

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Cablec</u>		
UCAR TR-4202 (XL)	1307 (10/10/85)	To obtain experience
DFDA 6202 HMW	1311 (12/19/85)	
<u>Conductor Products</u>		
DFDA 6202 HMW	1148 (9/28/78)	To obtain experience
	1198 (10/23/80)	
	1274 (1/9/84)	
UCAR TR-4202 XL	1293 (1/24/85)	To obtain experience
<u>Hendrix</u>		
DFDA 6202 HMW	1151 (11/16/78)	To obtain experience
	1198 (10/23/80)	
HFDE-4202 (XL)	1281 (5/31/84)	To obtain experience
<u>Pirelli</u>		
DFDA-6202 HMW	1152 (12/7/78)	To obtain experience
	1202 (12/18/80)	
UCAR TR-4202(XL)	1288 (10/18/84)	To obtain experience
<u>Reynolds</u>		
Reynotree-U	1151 (11/16/78)	To obtain experience
(DFDA-6202 HMW)	1196 (9/18/80)	
HEFD-4202 (XL)	1255 (3/24/83)	
	1258 (5/5/83)	
<u>Rockbestos Company</u>		
HFDA-4202 (XL)	1279 (5/3/84)	To obtain experience
<u>Rome Cable</u>		
UCAR TR-4202 (XL)	1279 (5/3/84)	To obtain experience
<u>Southwire</u>		
UCAR TR-4202 EC XL	1284 (8/2/84)	To obtain experience

Note: Listing on this page indicates acceptance of each manufacturer's use of the indicated tree-retardant insulation material in the manufacture of any primary cables listed under Item U hv.

U hy - Splice, Underground, Permanent

(when ordering, specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>AMP</u> "AmpactSplice" (35 kV)	1126 (11/3/77)	To obtain experience.
<u>Elastimold (ESNA)</u> Style 1500S, straight splice, through #1/0 (15 kV)	1135 (3/23/78)	To obtain experience.
Style 25-S, straight splice, #2/0 through #4/0 (15 kV)	1135 (3/23/78) 873 (7/27/67)	
Style 15PCJ-1, straight splice, through 4/0 (15 kV)	1311 (12/19/85)	To obtain experience.
Style 25-Y, Y-splice (15 kV)	921 (6/26/69)	
Style K-25-S, straight splice (25 kV)		
Style K-25-Y, Y-splice (25 kV)		
Style M-250-S, straight splice (35 kV)	1134 (3/2/78)	
<u>Blackburn</u> Type S4B (15 kV) Type S4C (25 kV)	1160 (3/29/79)	To obtain experience.
<u>Joslyn</u> Type PMS152 Straight Splice (15 kV) #4 through #1/0	1251 (1/20/83) 1296 (3/28/85)	To obtain experience.
<u>3M</u> Quick Splice II 5411, 5412 (15 kV) (#2 Awg thru #4/0 Awg)	1194 (9/4/80)	To obtain experience.
"Quick Splice" 5400 Series (15 kV) (250 kcmil thru 750) 5420 Series (25 kV)	969 (6/17/71) 1024 (8/30/73) 1032 (12/20/73)	

Conditional List
U hy(1.1)
Oct. 1985

U hy - Splice, Underground, Permanent

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>General Electric</u> 15 kV Straight Splice through #1/0, Model 9U16A_100 (15 kV)	1255 (3/24/83)	To obtain experience.
"Uni-Matic" Through #2/0, Model 9U06A (15 kV)	977 (10/14/79)	
"Uni-Matic" Through #2/0, Model 9U06A (25 kV)	977 (10/14/79)	
<u>Raychem</u> HVS 1510-R 200 Amp Splice kit	1275 (3/1/84)	To obtain experience.
<u>RTE</u> 15 kV - S15Z200 Series straight splice (#2 thru #4/0 solid or compacted)	1304 (8/8/85)	To obtain experience
15 kV - 2606780A Series straight splice (4/0 stranded)	1122 (9/8/77)	To obtain experience.
25 kV - 2606825A Series straight splice		
35 kV - 2603934B Series straight splice	1058 (2/6/75)	
<u>Somerset</u> Straight splices Style 15 DHS (15 kV) Style 25 DHS (25 kV) Style 35 DHS (35 kV)	1014 (4/12/73)	To obtain experience.

Conditional List
U hy(2)
July 1985

U hy - Splice, Underground, Separable

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
Elastimold (ESNA)		
Style 151-SR, receptacle (15 kV)	921 (6/26/69)	To obtain experience.
Style 151-SP, plug (15 kV)		
Style K-151-SR, receptacle (25 kV)		
Style K-151-SP, plug (25 kV)		

U hy - Splice, Underground, Permanent

(When ordering specify conductor size, type, whether
copper or aluminum and insulation diameter)

600 Ampere Continuous Current Rating

<u>Manufacturer</u>	<u>Meeting No. and Date</u>	<u>Conditions</u>
<u>Elastimold (ESNA)</u>		
Style 650-S, straight splice (15 kV)	1016 (5/10/73)	To obtain experience.
Style 15PCJ-2, straight splice, through 1250 MCM (15 kV)	1311 (12/19/85)	To obtain experience.
Style 650-Y, Y-Splice (15 kV)		
Style K650-S, straight splice (25 kV)		
Style K650-Y, Y-splice (25 kV)		
Style M650S, straight splice (35 kV)	1064 (5/1/75)	To obtain experience.
<u>Blackburn</u>		
15 kV - S65B Straight splice	1131 1/19/78)	To obtain experience.
25 kV - S65C straight splice		
<u>RTE</u>		
15 kV - 2604904B Series straight splice (MPS-600)	1122 (9/8/77)	To obtain experience.
25 kV - 2604905B Series straight splice (MPS-600)		